

IN THE SPECIFICATION:

Please replace the paragraph beginning on page 1, line 7, with the following amended paragraph:

--The present invention relates to a head positioning control method and device that reads a ~~positioning signal~~ servo signals of a storage disk and positions a head in a storage disk apparatus that uses the head to read/write information from/to the storage disk and more particularly to a head positioning control method and device for a storage disk device with a plurality of heads.--

Please replace the paragraph beginning on page 2, line 1, with the following amended paragraph:

--As shown in Fig. 12, a magnetic disk device has a magnetic ~~disk~~disks 90 and magnetic heads 91-a through 91-d. Servo signals are recorded for each sector on the magnetic ~~disk~~disks 90. Magnetic heads 91-a through 91-d read information from and write information to the magnetic ~~disk~~disks 90. The spindle motor 92 rotates the magnetic ~~disk~~disks 90. The voice coil motor 93 positions the magnetic heads 91-a through 91-d.--

Please replace the paragraph beginning on page 2, line 9, with the following amended paragraph:

--The servo signal demodulator (Figure 12) detects the servo ~~signal~~signals from the read output of one of the magnetic heads 91-a through 91-d in response to a servo gate signal and demodulates the servo signal into a position signal. The read-write circuit 96 demodulates read data from the output read from the magnetic heads 91-a through 91-d and supplies write data to magnetic heads 91-a through 91-d.--

Please replace the paragraph beginning on page 2, line 26, with the following amended paragraph:

--In this type of servo control system, ~~a servo signal is~~servo signals are recorded onto each sector of the magnetic ~~disk~~disks 90 so that the positions of magnetic heads 91-a through 91-d can be detected. When a device is equipped with a plurality of magnetic heads, positioning is controlled using servo signals read by the read/write head to be selected.--

Please replace the paragraph beginning on page 5, line 27 with the following amended paragraph:

--In an aspect of the present invention, the storage disk apparatus comprises a storage disk for recording servo signals, a plurality of heads for reading information on the

storage disk, an actuator for moving the heads, and a control circuit that positions the heads based on servo signals read from the storage disk by ~~the~~a selected head.--

Please replace the paragraph beginning on page 6, line 7, with the following amended paragraph:

--This head positioning control method comprises a step for synchronizing the time of a servo gate signal read by the head to which switching for detecting a servo signal with the time of a servo signal that is read by the head to which switching is directed in response to a head switching cue, and a step of reading a ~~head position~~servo signal in response to the synchronized ~~detection signal~~servo gate signal and positioning the head in response to the read ~~position~~servo signal.--

Please replace the paragraph beginning on page 7, line 9, with the following amended paragraph:

--In still another aspect of the present invention, the time determining step includes a step for reading the time at which the head to which the above switching is directed from the memory in which are stored the times that ~~position~~servo signals are read from each head.--

Please replace the paragraph beginning on page 10, line 3, with the following amended paragraph:

--As shown in Fig. 1, the magnetic disk drive 1 comprises ~~the~~ magnetic ~~disk~~disks 2 and magnetic heads 3a through 3d. Servo signals are embedded in each sector of the data ~~track~~tracks in ~~this~~the magnetic ~~disk~~disks 2. As shown in Fig. 3, the servo signal comprises the servo mark signal used to identify the servo signal, a track number that identifies the track number, and a two-phase servo signal comprising position signals PosA, PosB, PosC, and PosD.--

Please replace the paragraph beginning on page 10, line 11, with the following amended paragraph:

--Magnetic heads 3a through 3d read and write information from/on the magnetic ~~disk~~disks 2. The spindle motor 4 rotates magnetic ~~disk~~disks 2. The voice coil motor 5 positions magnetic heads 3a through 3d to a cylinder ~~track~~ of magnetic ~~disk~~disks 2. ~~The~~A servo gate generator 6 produces ~~the~~a servo gate signal with a servo signal period  $T_s$ . In response to the servo gate signal, the position detection circuit 7 demodulates the servo signal from magnetic heads 3a through 3d into a position signal.--

Please replace the paragraph beginning on page 10, line 20, with the following amended paragraph:

--The read-write circuit 8 demodulates read ~~signal~~signals from magnetic heads 3a through 3d and sends write data to magnetic heads 3a through 3d. The VCM drive circuit 9 drives the voice coil motor 5. The SPM drive circuit 10 drives the spindle motor 4.--

Please replace the paragraph beginning on page 10, line 25, with the following amended paragraph:

--The micro-controller 11 comprises a microprocessor, an analog to digital converter and a digital to analog converter, and reads servo signals in response to the servo gate signal. The controller 11 calculates the current head position from the ~~position~~servo signal and creates a current indication value in response to the distance from the target position.--

Please replace the paragraph beginning on page 13, line 26, with the following amended paragraph:

-- The position signal detection unit 27 demodulates the ~~position~~servo signal (refer to Fig. 3) from the data read from the head and sets this in the position information register 28. The micro-controller 11 that received the servo interruption starts servo processing. That is, the micro-controller 11 reads the position information stored in the position information register 28 and calculates the deviation from the target position. Also,

the micro-controller 11 creates a current indication value to eliminate the deviation, and then sends the current indication value to the VCM drive circuit 9.--

Please replace the paragraph beginning on page 20, line 11, with the following amended paragraph:

-- The position signal detection unit 27 demodulates the ~~position~~servo signal (refer to Fig. 3) from the data read from the head and sets this into the position information register 28. The micro-controller 11 that received the servo interruption starts servo processing. That is, the micro-controller 11 reads the position information from the position information register 28 and calculates the deviation from the target position. The micro-controller 11 then creates a current indication value to eliminate this deviation and send the current indication value to the VCM drive circuit 9.--

Please replace the paragraph beginning on page 26, line 24, with the following amended paragraph:

--(1) Because, in response to a head switching command, the detection time for a ~~detection~~servo gate signal is synchronized with the time of the head ~~position~~servo signal for the head in which switching is directed, even if the ~~position~~servo signal search operation is omitted when heads are switched, the ~~position~~servo signal for the head in which switching is directed can be detected.--

Please replace the paragraph (Abstract of the Invention) beginning on page 34, line 1, with the following amended paragraph:

--In a head positioning method and device in which the position of servo signals between heads is not uniform, it is aimed to reduce the time taken to find the ~~position~~servo signals ~~even~~ when heads are switched. ~~The~~A storage disk device comprises storage disks with the servo signals, a plurality of heads that read the information from the ~~recording~~storage disks, an actuator that moves the heads, and a control circuit that positions the heads based on the servo signals read from the storage disks by ~~the~~a selected head. This control circuit includes a synchronization circuit that, in response to a head switching cue, synchronizes the time of ~~the~~a servo gate signal (of the head to which switching is directed) for detecting ~~the~~a servo signal with the time of the servo signal read by the head to which switching is directed, and a processing circuit that reads the servo signal for the head in response to the synchronized detection signal and positions the head in response to the servo signal read.--